REMARKS

Applicants carefully reviewed the Office Action mailed on July 16, 2003. In response, the foregoing amendments are made to the specification and claims. After review and consideration of the amended claims in view of the following comments, it is believed the Examiner will agree that the inventions set forth patentably distinguish over the prior art.

On a preliminary note, a Request for a One Month Extension of Time is submitted concurrently herewith to move the response deadline to November 16, 2003. The Examiner is authorized to debit any fee required from Deposit Account No. 50-0568.

As amended, claim 1 now describes an acoustical and thermal insulator comprising a multilayer composite including (a) a first facing material layer, (b) a ***fibrous*** polymer based blanket layer (with the necessary correction made to address the antecedent basis problem and overcome the Section 112 rejection), and (c) an insulation insert encapsulated by the first facing material layer and the fibrous polymer based blanket layer. Despite the Examiner's assertion to the contrary, this structure is simply not taught or suggested by the combination of U.S. Patent No. 6,093,481 to Lynn et al. and 4,985,106 to Nelson et al.

By its own express terms, the primary reference to Lynn et al. relates solely to ". . . ***foam filled*** sheet products . . . and more particularly . . . to structurally rigid . . . sheets of ***foam*** . . . ." (col. 1, ll. 6-10). This "theme" of providing insulating sheathing based on a foam core is repeated throughout the entire patent. For example, reference is made to the following passages:

> "[i]t would be highly desirable if a ***foam*** insulation board could be produced with facers . . . [to] contribute overall good properties to the ***foam*** board" (col. 1, ll. 49-52);
>
> "[i]t is an object of the present invention to produce a rigid ***foam*** insulation board" (col. 1, ll. 55-56);
>
> "[i]t is a further object of the invention to produce a rigid ***foam*** laminate" (col. 1, ll. 62-63);
>
> "[t]he above objects have been achieved . . . [by] the present invention which utilizes a laminate facing sheet . . in the production of a ***faced foam laminate***" (col. 2, ll. 15-16).

These passages represent but a few examples of the emphasis placed on providing an insulator having a rigid foam core in this patent. Indeed, although various types of foam products are disclosed, no other type of "core" material besides foam is described.

In contrast, claim 1 requires a fibrous polymer based blanket layer (which is obviously not a "foam") and an insert encapsulated by this layer and a fibrous facing material. The Examiner essentially concedes that Lynn et al. teaches neither an insulation insert nor a fibrous polymer based blanket layer. This means that Lynn et al. is ostensibly cited only for its

teaching of providing a foam core with a facing, a practice obviously known before 1998 (see col. 1, line 21).

The Examiner contends that Nelson teaches a fibrous "polymer blanket material" in combination with an insert in the form of a "barrier pad 48" of "loaded vinyl, loaded asphalt, or asphalt impregnated felt" (col. 9, ll. 12-17). Yet, it is implicitly acknowledged that something is missing from this reference to arrive at the combination presently being claimed; namely, a fibrous facing layer. Even if such a fibrous facing layer is found in Lynn et al., nothing expressly teaches applying a fibrous polymer based blanket layer and insert to the laminated rigid foam core with a particular type of trilaminate facing that is the focus of that patent. The Examiner nevertheless posits it would be obvious to do so by dispensing with the need for objective evidence on this point and speculating that a skilled artisan clearly would have been motivated to make this combination "to provide improved noise, vibration, and heat insulation in a single insulation pad" (paper 6, p. 3).

An important point to consider, though, is that the application that matured into the Nelson patent was filed about ten years before the one that matured into the Lynn et al. patent (thus establishing the state of the art at that time), and issued more than seven years before it. Despite the availability of this reference to the skilled artisans who invented the foam insulation disclosed in the Lynn et al. patent, no mention is made of providing any form of insulation insert, period (and the Examiner does not cite to any other reference as suggesting this combination). This is the case

for one simple reason: reinforcing a rigid foam core with an insert is considered unnecessary and undesirable to "provide improved noise, vibration, and heat insulation." The simplest approach to achieve these benefits is, of course, to make the foam thicker, rather than trying to include an insert for this purpose. This is essentially the approach favored in the Lynn et al. patent (see col. 5, lines 34-41 and Table II at col. 9 bridging to col. 10), which is devoid of any possible language that can be construed as providing the requisite suggestion or motivation to add the barrier pad disclosed in the Nelson patent. Applicant's approach is different, since it does not use a rigid foam core, but rather a fibrous polymer based blanket layer in combination with an insulation insert formed of a select group of materials with a fibrous facing material, a combination not disclosed, taught, or suggested in the prior art.

A second, perhaps more important consideration is the emphasis placed on the rigidity of the foam throughout the Lynn et al. patent (including foam made of "rigid cellular polymers"; col. 5, l. 47). Accordingly, "encapsulating" an insert necessarily involves positioning it between the rigid foam core and the three-ply facing layer. Aside from the obvious aesthetic detraction from the bumpy and irregular appearance created, the resulting assembly would include a non-homogeneous, raised portion and leave the incredibly thin facing layer (0.3 mils to 5 mils, or three thousandths of an inch to five hundredths of an inch, in which range the average thickness of a human hair falls) susceptible to puncture or tearing at the margins of the insert. Resistance to puncturing and tearing is

precisely the problem with prior art foam insulation boards the invention of the Lynn et al. patent seeks to overcome by providing an insulation board with "outstanding toughness" (col. 1, l. 50). The proposed modification would thus require a complete redesign of the Nelson insulator and otherwise render it unsatisfactory for its intended purpose, both of which are indicia of non-obviousness. *See* MPEP § 2143.02 (8th ed., Rev. 1, 2003) and *In re Ratti* 123 USPQ 349 (CCPA 1959) ("w]e hold, further, that the combination of [references] . . . is not a proper ground for rejection of the claims here on appeal. This suggested combination of references would require a substantial reconstruction and redesign of the elements shown in [reference 1] as well as a change in the basic principles under which the . . . construction was designed to operate. Once appellant had taught how this could be done, the redesign may, by hindsight, seem to be obvious to one having ordinary skills. . . However, when viewed as of the time appellant's invention was made, and without the benefit of appellant's disclosure, we find nothing in the art of record which suggest appellant's novel [invention] . . .").

Indeed, instead of suggesting the use of an insert, the Lynn et al. patent substitutes three-ply facers for application to the outer surfaces of the rigid foam to provide "toughness," with the foam providing the resistance to heat, noise, and vibration. The Examiner further fails to explain in a convincing fashion why a skilled artisan would want to use the insert of the Nelson patent in the Lynn et al. patent, when: (1) the enhancement allegedly desired is already achieved by the novel three-ply facers used; and (2) this

would not be desirable at all and would simply detract from the more efficient approach proposed. Applicants submit that no convincing explanation is provided as to why a skilled artisan would want or be motivated to use the facings of Lynn et al. in combination with the different type of insulator disclosed in the Nelson patent.

With respect to these last points, it should again be recognized that the Nelson patent with its insulator was known many years before the Lynn et al. patent application was filed, and that the latter is concerned with improving the toughness of known foam insulation boards with facers. Despite the availability of the Nelson approach to improving insulators at the time the Lynn et al. application was filed, the latter fails to mention it as a possibility. Moreover, despite the lengthy period since the issuance of the Nelson patent, the Examiner remains unable to find a single reference offering a scintilla of a teaching or suggestion of making the combination proposed by the present Applicant. Rather than suggesting the ease with which the various structures could be combined or the desirability of doing so, the fact that others have independently known of insulation inserts for a long time but have failed to make or suggest the combination with an insulator including a fibrous facing material is a strong indicia of non-obviousness that simply cannot be ignored. *See Arkie Lures Inc. v. Gene Larew Tackle Inc.*, 43 USPQ2d 1294 (Fed. Cir. 1997) (holding that "the years of use of [element 1] and of [element 2], without combining their properties, weighs on the side of unobviousness of the combination.").

Claim 6 which depends from claim 1 and is rejected on the same grounds also very clearly patentably distinguishes over the combination of the Lynn et al. patent with the Nelson patent. More specifically, claim 6 describes the fibrous polymer based blanket layer as being selected from a group of various materials. The primary reference to Lynn et al. refers to foam materials not fibrous materials as claimed. Accordingly, this claim should be allowed. The same is true of claims 7-10, 12 and 14-17 since the primary reference to Lynn et al. and the secondary reference to Nelson simply fail to teach or suggest the claimed structure.

Claims 3-5 also very clearly patentably distinguish over a combination of the Lynn et al. and Nelson patents cited above even when considered in combination with U.S. Patent 4,438,166 to Gluck et al. In accordance with the Examiner's comments, the Gluck et al. patent is cited for its disclosure of a metallic foil reinforced with a fibrous scrim, a fibrous mat or a fibrous web consisting of glass fiber threads in a criss-cross pattern. The Gluck patent, however, fails to address the shortcomings noted above with respect to the teachings of the primary reference to Lynn et al. and the secondary reference to Nelson which prevent that combination from forming a valid basis for the rejection of claim 1 from which claims 3-5 depend. Applicants submit, the references do not lead one skilled in the art to provide an insulation insert of the material claimed encapsulated by a first facing material layer and a fibrous polymer based blanket layer. Accordingly, claims 3-5 are submitted to be patentable over the prior art and should be formally allowed.

Claim 7 clearly patentably distinguishes over the Lynn et al. and Nelson patents when considered in combination with U.S. Patent 5,366,678 to Nomizo et al. In accordance with the Examiner's comments, the Nomizo et al. patent is cited for its disclosure of a compression molding process to control the density and hardness of specific regions of a product, in this case a seat cushion. The Nomizo et al. patent, like the Gluck et al. patent, does not incorporate any form of insulation insert. Accordingly, it cannot provide the teachings missing from the Lynn et al. and Nelson patents noted above, and thus fails to provide appropriate support for a rejection of claim 7.

Claims 11 and 13 are clearly patentable over the Lynn et al. and Nelson patents when considered in combination with U.S. Patent 6,096,416 to Altenberg. The Altenberg patent is cited for its disclosure of a facing layer including a scrim in an insulating panel for the purpose of providing improved mechanical properties and flame resistance. The Altenberg patent does not include any form of encapsulated insulation insert. Accordingly, the Altenberg patent does not address the issues noted above with respect to the combination of the primary reference to Lynn et al. and the secondary reference to Nelson. Thus, Applicants submit that this proposed combination of references does not teach or suggest the provision of an acoustical or thermal insulator having an insulation insert encapsulated by a first facing material layer and a fibrous polymer based blanket layer as claimed. Thus, Applicants submit that the combination of references does

not provide a proper basis for the rejection of claims 11 and 13 under 35 USC § 103. Accordingly, Applicants request that these claims be allowed.

In addition, Applicant presents new dependent claims 18 and 19. Claim 18 depends from claim 1 and adds a second insulation insert adjacent to the other (first) insert. Claim 19 also depends from claim 1 and requires that the insert include a recessed portion adapted for matching with an adjacent structure for which enhanced protection from heat or sound transmission is desired. Since the features recited in these claims are shown in the original drawing figures, no new matter is added.

Finally, the specification is amended to include both the serial number of the copending application incorporated by reference, along with the number of the corresponding issued U.S. Patent.

In summary, all the pending claims are submitted to be patentably distinguished over the prior art and should be formally allowed. Upon careful review and consideration, it is believed the Examiner will agree with this proposition. Accordingly, the early issuance of a formal Notice of Allowance is earnestly solicited. If any fees are required pertaining to this response, the Applicants request that they be charged to Deposit Account No. 50-0568.

Respectfully submitted,

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Date: 17 Nov 2003

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